

What is claimed is:

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1. In a multicast capable Internet Protocol (IP) network, a method for communicating multicast packets between end stations on a chosen multicast (IP) address from a plurality of multicast IP addresses for multicast communication, the method comprising the step of:  
selectively varying the chosen multicast IP address from the plurality of multicast IP addresses according to a predetermined scheme known to the end stations; and communicating the packets on the chosen multicast IP address.
  2. The method of claim 1 wherein the packets are communicated to an end station having subscribed to a set of multicast IP addresses comprising at least one multicast IP address from the plurality of multicast IP addresses for multicast communication and including the chosen multicast IP address for transmitting the packets.
  3. The method of claim 2 wherein the set of multicast IP addresses is selectively varied according to a predetermined scheme known to the end stations.
  4. The method of claim 3 wherein the predetermined scheme for selectively varying the set of multicast IP addresses comprises randomly adding to and dropping from the set of multicast IP addresses.
  5. The method of claim 1 wherein the step of selectively varying the chosen multicast IP address comprises:  
randomly hopping from one multicast IP address to another.
  6. The method of claim 3 wherein the step of selectively varying the chosen multicast IP address comprises:  
randomly hopping from one multicast IP address to another chosen from the set of multicast IP addresses.

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7. The method of claim 1, further including the steps of:  
receiving unicast data intended for a host site by at least one end station for transmitting multicast packets; and  
formatting said unicast data into said multicast packets for communicating on said chosen multicast IP address to at least one end station for receiving multicast packets;  
wherein at least one of said end station for receiving multicast packets is capable of communicating said unicast data to said host site.
8. The method of claim 7 further including the step of:  
identifying to the network a preferred route to the host site through said at least one end station for transmitting multicast packets.
9. The method of claim 6 further including the step of:  
filtering said unicast data received and limiting the rate of communicating multicast packets.
10. The method of claim 9 wherein the step of filtering comprises identifying and discarding unicast data implementing an attack on said host site.
11. The method of claim 6 wherein said end stations for transmitting multicast packets are located within a single autonomous system of the network.
12. The method of claim 11 wherein said end station for transmitting multicast packets are located adjacent to border routers within the single autonomous system of the network.
13. In a multicast capable Internet Protocol (IP) network, a system for communicating multicast packets between end stations on a chosen multicast (IP)

address from a plurality of multicast IP addresses for multicast communication, the system comprising:

means for selectively varying the chosen multicast IP address from the plurality of multicast IP addresses according to a predetermined scheme known to the end stations; and means for communicating the packets on the chosen multicast IP address.

14. The system of claim 13 wherein the packets are for communication to an end station having means to subscribed to a set of multicast IP addresses comprising at least one multicast IP address from the plurality of multicast IP addresses for multicast communication and including the chosen multicast IP address for transmitting the packets.

15. The system of claim 14 wherein the packets are for communication to an end station having means to selectively vary the set of multicast IP addresses according to a predetermined scheme known to the end stations.

16. The system of claim 15 wherein the predetermined scheme for selectively varying the set of multicast IP addresses comprises randomly adding to and dropping from the set of multicast IP addresses.

17. The system of claim 13 wherein the means for selectively varying the chosen multicast IP address comprises:

means for randomly hopping from one multicast IP address to another.

18. The system of claim 15 wherein the means for selectively varying the chosen multicast IP address comprises:

means for randomly hopping from one multicast IP address to another chosen from the set of multicast IP addresses.

19. The system of claim 13, further comprising:

means for receiving unicast data intended for a host site by at least one end station for transmitting multicast packets; and

means for formatting said unicast data into said multicast packets for communicating on said chosen multicast IP address to at least one end station for receiving multicast packets;

wherein at least one of said end station for receiving multicast packets comprises means for communicating said unicast data to said host site.

20. The system of claim 19 further comprising:

means for identifying to the network a preferred route to the host site through said at least one end station for transmitting multicast packets.

21. The system of claim 18 further comprising:

means for filtering said unicast data received and limiting the rate of communicating multicast packets.

22. The system of claim 21 wherein the means for filtering comprises means for identifying and discarding unicast data implementing an attack on said host site.

23. The system of claim 18 wherein said end stations for transmitting multicast packets are, when in use, located within a single autonomous system of the network.

24. The system of claim 23 wherein said end station for transmitting multicast packets are, when in use, located adjacent to border routers within the single autonomous system of the network.